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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/574,740	05/18/2000	Michael S. South		9926

7590 06/27/2003  
Senniger, Powers, Leavitt & Roedel  
One Metropolitan Square  
16th Floor  
St. Louis, MO 63102

EXAMINER

TRUONG, TAMTHOM NGO

ART UNIT	PAPER NUMBER
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1624

DATE MAILED: 06/27/2003

19

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/574,740

Applicant(s)

SOUTH ET AL.

Examiner

Tamthom N. Truong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 17-24, 33-40, and 46-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 17-24, 33-40, and 46-57 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

Applicant's amendment of 4-17-02 has been fully considered. Although the amended claims present elected subject matter, it is noted that the elected group III is a "phantom" group, which still covers a broad range of compounds. A meaningful search cannot be carried out without further restriction. Thus, the following restriction is presented.

Claims 17-24, 33-40, and 46-57 are pending.

#### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 17-24 (in part), and 46-57 (in part), drawn to compounds, and composition of the formula in claim 17, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

$R^2$  is  $Z^0$ -Q, with Q as an aryl group, and  $Z^0$  is a bond;  
 $Y^0$  is formula IV with  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  as carbon, or  $Y^0$  is a benzyl (or phenyl), or  
 $Y^0$  is formula IV with one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  as nitrogen, or  $Y^0$  is a pyridyl group (or pyridyl-methyl group),

classified in class 546, subclasses 246, 247.
  - II. Claims 17-23 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 17, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

$R^2$  is  $Z^0$ -Q, with Q as an aryl group, and  $Z^0$  is a bond;  
 $Y^0$  is formula IV with  $D^5$  and  $D^6$  as nitrogen atoms, or  $J^5$  and  $J^6$  as nitrogen atoms, or  $Y^0$  is a pyrimidyl group (or pyrimidyl-methyl group),

classified in class 544, subclasses 322, 323.

- III. Claims 17-23 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 17, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

$R^2$  is  $Z^0$ -Q, with **Q as an aryl group**, and  $Z^0$  is a bond;  
 $Y^0$  is formula IV with  $D^5$  and  $J^6$  as nitrogen atoms, or  $J^5$  and  $D^6$  as nitrogen atoms, or  **$Y^0$  is a pyrazinyl group (or pyrazinyl-methyl group)**,

classified in class 544, subclass 382+.

- IV. Claims 17-23 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 17, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

$R^2$  is  $Z^0$ -Q, with **Q as an aryl group**, and  $Z^0$  is a bond;  
 $Y^0$  is formula IV with  $D^5$  and  $J^5$  as nitrogen atoms, or  $J^6$  and  $D^6$  as nitrogen atoms, or  **$Y^0$  is a pyridazinyl group (or pyridazinyl-methyl group)**,

classified in class 544, subclass 238.

- V. Claims 17-23 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 17, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

$R^2$  is  $Z^0$ -Q, with **Q as an aryl group**, and  $Z^0$  is a bond;  
 $Y^0$  is formula IV with one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  as a bond, while the others are O, S, and/or N, or  **$Y^0$  is thiophene, thiazole, oxazole, furanyl, pyrrole, imidazole, or pyrazole.**

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Classified in class 546, subclasses 269.7, 271.4, 272.7, 275.4, etc.

- VI. Claims 17-23 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 17, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

$R^2$  is  $Z^0$ -Q, with **Q as an heteroaryl group**, and  $Z^0$  is a bond;  
 $Y^0$  is formula IV with  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  as carbon, or  **$Y^0$  is a benzyl (or phenyl), or**  
 $Y^0$  is formula IV with one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  as nitrogen, or  **$Y^0$  is a pyridyl group (or pyridyl-methyl group),**

classified in class 546, subclasses 257, 264, etc.

- VII. Claims 17-23 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 17, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

$R^2$  is  $Z^0$ -Q, with **Q as an heteroaryl group**, and  $Z^0$  is a bond;  
 $Y^0$  is formula IV with  $D^5$  and  $D^6$  as nitrogen atoms, or  $J^5$  and  $J^6$  as nitrogen atoms, or  **$Y^0$  is a pyrimidyl group (or pyrimidyl-methyl group),**

classified in class 544, subclass 333.

- VIII. Claims 17-23 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 17, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

$R^2$  is  $Z^0$ -Q, with **Q as an heteroaryl group**, and  $Z^0$  is a bond;  
 $Y^0$  is formula IV with  $D^5$  and  $J^6$  as nitrogen atoms, or  $J^5$  and  $D^6$  as nitrogen atoms, or  **$Y^0$  is a pyrazinyl group (or pyrazinyl-methyl group),**

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classified in class 544, subclasses 359, 360, 361, etc.

- IX. Claims 17-23 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 17, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

$R^2$  is  $Z^0$ -Q, with **Q as an heteroaryl group**, and  $Z^0$  is a bond;  
 $Y^0$  is formula IV with  $D^5$  and  $J^5$  as nitrogen atoms, or  $D^6$  and  $J^6$  as nitrogen atoms, or  **$Y^0$  is a pyridazinyl group (or pyridazinyl-methyl group)**,

classified in class 544, subclass 238.

- X. Claims 17-23 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 17, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

$R^2$  is  $Z^0$ -Q, with **Q as an heteroaryl group**, and  $Z^0$  is a bond;  
 $Y^0$  is formula IV with one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  as a bond, while the others are O, S, and/or N, or  **$Y^0$  is thiophene, thiazole, oxazole, furanyl, pyrrole, imidazole, or pyrazole,**

Classified in class 546, subclasses 192, 193, etc.

- XI. Claims 33-40 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 33, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

W, X, Y, and Z are **all carbon atoms**;  
 $Y^0$  is formula IV with  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  as carbon, or  **$Y^0$  is a benzyl (or phenyl),**

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classified in class 546, subclass 134 .

- XII. Claims 33-39 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 33, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

**One of W, X, Y, and Z is nitrogen**, while the others are carbon atoms; Y<sup>0</sup> is formula IV with D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> as carbon, or **Y<sup>0</sup> is a benzyl (or phenyl)**,  
Y<sup>0</sup> is formula IV with one of D<sup>5</sup>, D<sup>6</sup>, J<sup>5</sup>, and J<sup>6</sup> as nitrogen, or **Y<sup>0</sup> is a pyridyl group (or pyridyl-methyl group)**,

classified in class 546, subclass 122.

- XIII. Claims 33-39 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 33, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

**One of W, X, Y, and Z is nitrogen**, while the others are carbon atoms; Y<sup>0</sup> is formula IV with D<sup>5</sup> and D<sup>6</sup> as nitrogen atoms, or J<sup>5</sup>, and J<sup>6</sup> as nitrogen atoms, or **Y<sup>0</sup> is a pyrimidyl group (or pyrimidyl-methyl group)**,

Classified in class 544, subclasses 324, 328, 333.

- XIV. Claims 33-39 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 33, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

**One of W, X, Y, and Z is nitrogen**, while the others are carbon atoms; Y<sup>0</sup> is formula IV with D<sup>5</sup> and J<sup>6</sup> as nitrogen atoms, or J<sup>5</sup>, and D<sup>6</sup> as nitrogen atoms, or **Y<sup>0</sup> is a pyrazinyl group (or pyrazinyl-methyl group)**,

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Classified in class 544, subclass 362.

- XV. Claims 33-39 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 33, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

**One of W, X, Y, and Z is nitrogen**, while the others are carbon atoms;  $Y^0$  is formula IV with  $D^5$  and  $J^5$  as nitrogen atoms, or  $J^6$  and  $D^6$  as nitrogen atoms, or  $Y^0$  is a **pyridazinyl group (or pyridazinyl-methyl group)**,

Classified in class 544, subclass 238.

- XVI. Claims 33-39 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 33, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

**One of W, X, Y, and Z is nitrogen**, while the others are carbon atoms;  $Y^0$  is formula IV with one of  $D^5$ ,  $D^6$ ,  $J^5$ , and  $J^6$  as a bond, while the others are O, S, and/or N, or  $Y^0$  is **thiophene, thiazole, oxazole, furanyl, pyrrole, imidazole, or pyrazole**,

Classified in class 546, subclass 122.

- XVII. Claims 33-39 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 33, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

**Two of W, X, Y, and Z is nitrogen**, while the others are carbon atoms;

Classified in class 544, subclass 279.



XVIII. Claims 33-39 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 33, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

**Three of W, X, Y, and Z is nitrogen**, while the others are carbon atoms;

Classified in class 544, subclass 256.

XIX. Claims 33-39 (in part), and 47-57 (in part), drawn to compounds, and composition of the formula in claim 33, and their method of inhibiting thrombotic conditions wherein said formula has the following substituents:

**One of W, X, Y, and Z is bond**, while the others are O, S, and/or N atoms;

Classified in class 546, subclasses 114, 115, 117, 118, etc.

The inventions of groups I - XIX differ from each other because each group is drawn to a different combination of ring systems that is distinct and patentable over each other. Essentially, these are nineteen independent inventions as compounds of one group can be utilized alone, and not in combination of those in other groups. Note, with a variable core as such, the common property is not enough to keep nineteen groups in the same Markush claim. Furthermore, a prior art that renders obvious one invention would not do so to the other. Thus, restriction for examination purpose as indicated is proper. However, should applicant traverse on the ground that the nineteen groups are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the nineteen groups to be obvious variant or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the invention

unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Due to the complexity of the restriction, this written restriction is presented. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

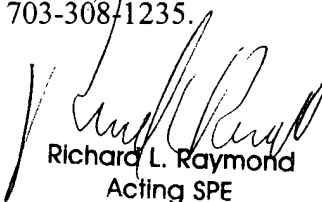
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamthom N. Truong whose telephone number is 703-305-4485. The examiner can normally be reached on M-F (9:30-5:00) & every Saturday morning (starting from 4-7-03).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mukund Shah can be reached on 703-308-4716. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4556 for regular communications and 703-308-4556 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235.

  
T. Truong  
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June 26, 2003

  
Richard L. Raymond  
Acting SPE  
Art Unit 1624